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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,877	12/16/2003	Keita Honda	4041K-000162	5746

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EXAMINER

FORD, JOHN K

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,877

Applicant(s)

HONDA, KEITA

Examiner

John K. Ford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/8/05
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/16/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Applicant's response of March 5, 2005 has been carefully considered. Applicant has elected the species of Figure 1, without traverse, and has identified claims 1-5 and 7-9 as readable thereon. In addition applicant has amended claim 1 to place the hybrid automobile, running engine and running motor in the preamble, thereby broadening claims 1 and 7. Functional recitations of intended fluids to be cooled continue to be associated with the first heat exchanger, first radiator and second radiator. These are not given patentable weight for the reasons set forth in MPEP 2114, incorporated here by reference. As interpreted by the Examiner, applicant's claimed combination is drawn to a heat exchanger and two radiators, each having intended fluids associated with it. The hybrid vehicle, running engine and running motor, as the examiner understands it, are not part of the claimed combination.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 7, it is unclear what structural limitation on the construction of the first and second radiators is imposed by the limitation "an integrated type radiator." An argument can be made that all radiators are integrated. Please recite whatever structural limitations are encompassed by this term as explicit limitations in the claims. It is unclear in claims 3 and 9 what is meant by "a portion" in regard to elected Figure 1. Doesn't refrigerant flow through the whole of condenser 4 in Figure 1 and not "only in a

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portion" of it? Please explain how claims 3 and 9, as written, are descriptive of Figure 1. If they are not, either designate them as non-elected or amend them to be descriptive. Claims 4 and 5 also do not appear to be descriptive of Figure 1. There is no portion of the heat exchanger opposed to the upstream side of the second radiator in the disclosure of Figure 1. See the specification. Either amend claims 4 and 5 to be descriptive of Figure 1, designate them as non-elected or explain precisely how claims 4 and 5 are descriptive of Figure 1.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ozaki et al. (USP 6,789,613).

Ozaki is assigned to Denso Corporation. It discloses a low temperature radiator 120 and a high temperature radiator 110. In front of the high temperature radiator is a condenser core 150. Condenser core 150 is only in front of the high temperature radiator 110. Functional statement about intended fluids, temperatures and flow rates are not extended patentable weight in claims drawn to the apparatus. See MPEP 2114, incorporated here by reference.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki et al. (USP 6,789,613) alone or in view of Gabriel et al (P.G. pub 2003/0230996) and optionally Banzhaf et al. (USP 5,215,044).

Ozaki has been explained above and that explanation is incorporated by reference here. To have omitted cooler 160 in Ozaki to have reduced the cost of the system and maximize the amount of cooling of heat exchanger 120 (i.e. using only a single-pass condenser 150) would have been obvious to one of ordinary skill in the art. The omission of an element and its function does not generally impart patentability to the resulting combination. See MPEP 2114.04, II. "Elimination of a step or an element and its function," incorporated here by reference.

Finally, Gabriel et al teaches in paragraphs 0014, 0015 and 0049, incorporated here by reference, that typically in hybrid vehicles the engine radiator and A/C condenser are cooled by a fan that is separate from the system for cooling electronics, that employs its own fan (810 in Figure 4) and is formed as a separate cooling system heat exchanger 805 that receives its own ambient air stream.

To have omitted cooler 160 in Ozaki so that the heat exchanger 120 would (like heat exchanger 805 of Gabriel) receive ambient air that has the lowest temperature and

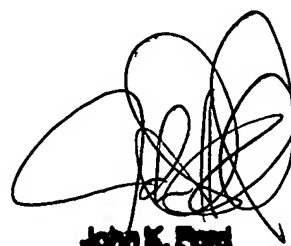
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hence most efficiently cools the inverter/electronics of the hybrid vehicle would have been obvious to one of ordinary skill in the art.

Banzhaf is cited and relied upon in this rejection simply to illustrate how a condenser 7 and engine radiator 3 are normally arranged in series, whereas heat exchangers 36, 4 and 5 for auxiliary devices associated with the vehicle are not normally covered by the condenser (i.e. they are directly exposed to ambient air flow).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John K. Ford
Primary Examiner